

Amendments to the Claims

Claims 1-47. (cancelled)

48. (new) A polymer of gluten comprising gluten proteins, wherein said gluten proteins are intermolecularly covalently linked through polythiol-containing molecules.

49. (new) The polymer of claim 48, which has a strength higher than 30 MPa.

50. (new) A process for preparing a polymer of gluten comprising gluten proteins comprises the step of mixing said gluten proteins in a gluten-dispersing mixture with polythiol-containing molecules.

51. (new) The process of claim 50, wherein said gluten-dispersing mixture is an aqueous environment.

52. (new) The process of claim 50, comprising the step of isolating said gluten polymer by precipitation and subsequent centrifugation.

53. (new) The process of claim 50, comprising the step of drying said gluten-dispersing mixture comprising said gluten proteins so as to obtain a dried material.

54. (new) The process of claim 53, comprising the step of first ageing said dried material by leaving it unhandled for a certain time period and then compression-moulding said dried material.

55. (new) The process of claim 54, wherein said time period is at least 7 days.

56. (new) The process of claim 54, wherein said time period is at least 30 days.

57. (new) The process of claim 54, wherein said time period is about 30 days to about 90 days.

58. (new) The process of claim 54, wherein said ageing is performed at room temperature.

59. (new) The process of claim 54, wherein said ageing is performed at a temperature of over 25° C.

60. (new) The process of claim 54, wherein said ageing is performed at a temperature higher than 40° C.

61. (new) A process for preparing a gluten based polymer comprising the steps of: (a) mixing gluten in a gluten-dispersing mixture together with polythiol-containing molecules;

(b) drying the mixture resulting therefrom so as to obtain dried material;

(c) ageing said dried material by leaving it unhandled for a certain time period; and

(d) compression-moulding said dried material or a selection or combination thereof.

62. (new) The process of claim 61 which comprises a step of precipitating the reaction products out of the mixture by mixing gluten in a gluten-dispersing mixture together with polythiol-containing molecules and thereafter the step of centrifuging said mixture before drying the precipitate.

63. (new) A composite material comprising fibers and a gluten polymer intermolecularly covalently linked through polythiol-containing molecules according to claim 48.

64. (new) A process for preparing a composite material comprising fibers and a gluten polymer, wherein the process comprises the steps of:

(a) pre-coating said fibers with the gluten polymer of claim 48; and

(b) contacting the pre-coated fibers obtained under (a) with a gluten-dispersing mixture.

65. (new) The process of claim 64, comprising a final step of drying the material obtained after step (b), ageing said material by leaving said material unhandled for a certain time period, and then compression-moulding said material.

66. (new) A process for preparing a gluten-fiber composite material, comprising the steps of mixing gluten and fiber in a gluten-dispersing mixture, drying the gluten-fiber mixture so obtained, ageing the dried mixture by leaving the dried mixture unhandled for at least 30 days and compression-moulding the dried gluten-fiber mixture.

67. (new) A process for preparing a gluten-fiber composite material, comprising the steps of pre-coating fibers with the gluten polymer under dry circumstances and then contacting the pre-coated fibers with a gluten-dispersing mixture.

68. (new) A process according to claim 67, wherein one, two or all of the following steps are performed:

(a) drying the gluten-coated fibers;

(b) ageing said gluten-coated fibers by leaving them unhandled for a certain time period; and

(c) compression-moulding said gluten-fiber composite material.

69. (new) A composite material prepared by the process of claim 67.

70. (new) Gluten that is compression-moulded after it is aged by being left unhandled for a certain period of time.